PATENT CLAIMS

A subA2 What is claimed is:

1. A torsional vibration damper with two modules (1, 2) that rotate in relation to each other, and with a spring chamber (7), characterized in that the first module (1) has a first guide surface (30) and seals the spring chamber (7) radially outward, whereby the first guide surface is at a distance from the second module (2) across a gap (31) and is essentially radial, and an essentially radial second guide surface (50) is provided that covers the gap (31) on the spring chamber side.

2. A torsional vibration damper according to claim 1, characterized in that the first guide surface (3) is a baffle (3) that is fixed to the first module (1).

3. A torsional vibration damper according to claim 2, characterized in that the baffle (3) is in the shape of a washer.

4. A torsional vibration damper according to one of the prior claims, characterized in that the second guide surface (50) is designed as a guide disk (5).

5. A torsional vibration damper according to claim 4, characterized in that the guide disk (5) is in the shape of a washer.

6. A torsional vibration damper according to claims 4 or 5, characterized in that the guide disk (5) is fixed to the first guide surface (50).

7. A torsional vibration damper according to claims 4 or 5, characterized in that there is at least one opening (6) between the first guide surface (30) and the second guide surface (50) that faces the spring chamber (7).

8. A torsional vibration damper according to claim 7, characterized in that the opening (5) is situated so that a particle moving radially can pass through.

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9. A torsional vibration damper according to one of claims 1 to 8, characterized in that there is a calm area (40) between the first and second guide surface (30, 50) close to the gap (31) that is between the first guide surface (30) and second module (29).

10. A torsional vibration damper according to claim 9, characterized in that the calm area (40) has an opening extending radially outward that leads to the spring chamber.

11. A torsional vibration damper according to one of claims 1 to 10, characterized in that there is a sealing material (4) between the first and second guide surface (30, 50) that covers the gap between the first guide surface (30) and second module (2) at least when the torsional vibration damper is at rest.

12. A torsional vibration damper according to claim 11, characterized in that the sealing ring (4) is held under radial, inward pretension of a guide disk comprising one of the two guide surfaces, and the guide disk can be designed so that the pretension is reduced preferably to zero when the torsional vibration damper rotates.

13. A torsional vibration damper according to one of claims 1 to 12, characterized in that the second module (2) has a third, essentially radial guide surface (20) that covers an axial gap (51) between the second guide surface (50) and the second module (2) on the side facing away from the spring chamber (7).

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14. A torsional vibration damper according to claim 13, characterized in that the gap (31) between the first guide surface (30) and second module (2) is further removed in an axial direction from the spring chamber than the third guide surface (20).

15. A torsional vibration damper according to one of claims 1 to 14, characterized by means (3, 32, 42) that seal a gap between the modules (1, 2) depending on an angle of rotation between the first module (1) and the second module (2).

16. A torsional vibration damper according to claim 15, characterized in that the sealing means (3, 32, 42) comprise at least one projection (32) that is moved axially upon a certain angle of rotation.

17. A torsional vibration damper according to one of claims 1 to 16, characterized by a grease transporting system activated by centrifugal force.

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18. A torsional vibration damper according to claim 17, characterized in that the grease transporting system has a grease collector arranged radially inwardly and a grease dispenser that is radially further out, especially at least one opening (6) or a hole (60), whereby means are provided between the grease dispenser and grease collector to move the grease along its path from the grease dispenser to the grease collector in a peripheral direction.

Add A3)

Add B5)

Add C8)